

Appl. No. 10/626,999
Reply to Office action of Mar. 21, 2007

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method for creating a new control chart using a computer, the method comprising:

providing a database including a plurality of ~~[[status]]~~ statistical process control (SPC) control charts and a plurality of tables;

determining that information stored in at least one of the plurality of tables has changed;

determining whether the changed information is describable by at least one of the plurality of SPC control charts;

updating the at least one of the plurality of SPC control charts with the changed information using the computer, upon a determination that the changed information is describable by at least one of the plurality of SPC control charts;

creating a new control chart that can describe the changed information, upon a determination that the changed information cannot be described by at least one of the plurality of SPC control charts; ~~[[and]]~~

determining whether the new control chart is a new trend chart, which is a control chart that has not been previously used on tools of a type that is associated with the new control chart; and

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applying the SPC control charts for monitoring production in manufacturing.

2. (Previously presented) The method as set forth in claim 1, wherein:
providing the database includes storing the plurality of SPC control charts and the plurality of tables in the database; and
the new control chart is created in a basic record system that includes a server coupled to the database.

3. (Previously presented) The method as set forth in claim 2, wherein the SPC control charts include information relating to the detection of abnormal process trends from the statistical behavior.

4. (Previously presented) The method as set forth in claim 3, wherein:
the plurality of tables are selected from a group consisting of a primary route table, a sub route table, a tool table, a recipe table, a specification table, a measure field table, and a measure item table;
and

the method further comprises verifying the format of the plurality of SPC control charts and the plurality of tables.

5-6. (Cancelled)

7. (Previously presented) The method as set forth in claim 2, wherein the method further comprises calculating a plurality of control limit values for the new trend chart by using one or more predetermined

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functions to obtain optimized control limit values, when the new control chart is a new trend chart.

8. (Previously presented) The method as set forth in claim 7, wherein the one or more predetermined functions are selected from a group consisting of mathematics expressions.

9. (Previously presented) The method as set forth in claim 2, further comprising determining whether the control limit values for the new control chart are the same as the control limit values of at least one of the plurality of SPC control charts, when the new control chart is not a new trend chart.

10. (Currently amended) The method as set forth in claim 9, wherein each of the plurality of [[SBC]] SPC control charts includes a plurality of control limit values.

11. (Previously presented) The method as set forth in claim 9, wherein the method further comprises using on-line values for the control limit values of the new control chart, when control limit values for the new control chart are the same as the control limit values of the at least one of the plurality of SPC control charts.

12. (Previously presented) The method as set forth in claim 9, wherein the method further comprises sending a command to the server for determining whether to create the new control chart, and what control

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limit values to set, when the control limit values are not the same.

13. (Previously presented) The method as set forth in claim 12, and further comprising adding the new control chart and the plurality of control limit values to a negative list when the new control chart is not created.

14. (Previously presented) The method as set forth in claim 3, wherein the determining that information stored in at least one of the plurality of tables has changed is preceded by a step of determining when information stored in at least one of the plurality of tables has changed and by another step of, when the information has not changed, repeating the step of determining when information stored in at least one of the plurality of tables has changed.

15. (Previously presented) The method as set forth in claim 1, and further comprising:

- calculating a plurality of control limit values for the new control chart, when the new control chart is a new trend chart;

- determining whether the control limit values of the new control chart are the same as control limit values of at least one of the plurality of SPC control charts, when the new control chart is not a new trend chart;

- using on-line values for the control limit values of the new control chart, when the control limit values are the same; and

- sending a command to the server for determining whether to

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create the new control chart, and what control limit values to set for the new control chart, when the control limit values are not the same.

16. (Previously presented) The method as set forth in claim 15, further comprising verifying the format of the plurality of SPC control charts and the plurality of tables.

17. (Previously presented) The method as set forth in claim 15, wherein the new trend chart is defined as a control chart that has not been previously used on tools of a type that is associated with the new control chart.

18. (Previously presented) The method as set forth in claim 15, wherein the calculating of a plurality of control limit values uses one or more predetermined functions to obtain optimized control limit values.

19. (Previously presented) The method as set forth in claim 18, wherein the one or more predetermined functions are selected from a group consisting of mathematics expressions.

20. (Previously presented) The method as set forth in claim 15, further comprising adding the new control chart and the calculated plurality of control limit values to a negative list when the new control chart is not created.

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21. (Currently amended) A ~~[[status]]~~ statistical process control (SPC) control chart building method for use with a computer, the method comprising:

checking data stored in a database that stores a plurality of SPC control charts and tables to ascertain whether any of the data has changed;

checking at least one of the plurality of tables and determining whether the changed data is describable by any of the plurality of SPC control charts, when any of the data has changed;

building a new control chart using the computer when the SPC control charts cannot describe the changed data;

determining whether the new control chart is a new trend chart, which is a control chart that has not been previously used on tools of a type that is associated with the new control chart;

calculating values of a plurality of control limits of the new control chart using a predetermined function, when the new control chart is a new trend chart;

using on-line values to fit into the control limits of the new control chart, when the new control chart is not a new trend chart and the control limits of the new control chart are the same as the ones in the existing SPC control charts; and

generating an alarm, when the new control chart is not a new trend chart and the control limits of the new control chart are not the same as the ones in the existing SPC control charts.

22. (Cancelled)

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23. (Previously presented) The method as set forth in claim 22,
wherein the checking and determining are performed automatically.

24. (Cancelled)